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WIYOT AND YUROK, ALGONKIN LANGUAGES OF CALIFORNIA

By EDWARD SAPIR

AMONG the numerous "linguistic stocks" of California, there are two particularly small ones whose borders are confined within a small territory in northwestern California. These are Yurok (or Weitspekan) of lower Klamath river and Wiyot (or Wishosk) of Humboldt bay; they occupy contiguous territory along the Pacific coast. It is the purpose of this paper to show that not only are these so-called "stocks" genetically related, but that they are outlying members—very divergent, to be sure, but members nevertheless—of the Algonkin stock. We shall begin by making sure of the genetic relationship of Wiyot and Yurok.

I. WIYOT AND YUROK

The material available for a study of these two languages is far from satisfactory, either as regards quantity or depth of analysis. For Wiyot we have A. L. Kroeber's paper in "The Languages of the Coast of California north of San Francisco"¹ (pp. 384–413); for Yurok, a shorter paper by Kroeber in the same volume (pp. 414–426). Dr Kroeber has also kindly put at my disposal a vocabulary of Yurok, which is particularly valuable in that in it he points out a number of Wiyot parallels.²

As regards the relation of Wiyot and Yurok, Dr Kroeber has expressed himself rather guardedly. In 1910 he writes: "Whether the two languages are related is . . . another question. A running acquaintance with both reveals but few words that are similar. . . . This number is so small that unless it is materially increased by

¹ *University of California Publications in American Archaeology and Ethnology*, vol. 9, no. 3, 1911.

² Since this paper was written, Dr T. T. Waterman, who has considerable manuscript Yurok material, has kindly sent me further Yurok data to work with. Several new Yurok-Algonkin cognates were thus ascertained. Waterman's forms are cited as Wat.

further comparison, the resemblances must be regarded as due either to accident or to borrowing. A systematic comparison cannot be made until both languages are farther analyzed and the stems and elements of words, which in most cases are complex, are determined." And, further on, "Loose unification of languages that may be entirely distinct, based only on general or partial grammatical similarities, is unwarranted. The structural resemblances between Yurok and Wiyot are however so close and often so detailed, as will be seen, as to create a presumption that lexical and genetic relationship may ultimately be established; and if not, to make it certain that morphological interinfluences between the two languages have greatly modified one or both."¹ The most striking morphological similarities noted by Kroeber are in the pronominal forms. He summarizes these similarities as follows:

The pronominal forms of Yurok and Wiyot agree in the following points: They are incorporative. Elements added to nouns [possessive elements] are prefixed, those added to verbs suffixed. The prefix and independent forms are similar to one another, the suffix forms entirely dissimilar, also differing completely among themselves according as they are objective or subjective. The objective suffixes precede the subjective, which are identical whether transitive or intransitive. There is a form, used with body-part terms, denoting indefiniteness or absence of possession; it is *m-* in both languages. The fundamental elements of the possessive and independent forms in both languages seem to be *n* for the first person and *k* for the second,—the former common, the latter exceptional in American languages and therefore significant. The suffix forms in the two languages however show no similarity.²

In his summary of Yurok Kroeber remarks:

The Yurok language is of the type known as appositional in that pronominal, modal, temporal, adverbial, and other elements are attached to the verb stem, which serves as the center of grammatical construction, the other words of the sentence being syntactically connected with it through these affixes. The verb is therefore complex, the pronominal elements are essentially affixes, and the grammar of the noun and substantival pronoun is reduced to a minimum, while the adjective is a verb. The pronominal elements are suffixed, but most other relations, including those of manner and time, are expressed by prefixes to the verb. The possessive prefixes of the noun, and the emphatic substantival pronouns, show no similarity to the pronominal affixes of verbs. Number and syn-

¹ Kroeber, op. cit., pp. 414-15.

² Kroeber, op. cit., p. 420.

tactical case-relations are not expressed. Numerals are provided with classifying suffixes. Derivation is by suffixation, and many nouns are based on verb stems. . . . In all these respects Wiyot agrees with Yurok.¹

The most, then, that Kroeber has been willing to assert is an undeniably close similarity of grammatical structure between Yurok and Wiyot. The few cases of lexical correspondence that he then noted seemed hardly enough to justify the hypothesis of genetic relationship. Since then, however, more comparable material has accumulated and, in view of the morphological and lexical resemblances thus established, it seems safe to consider Yurok and Wiyot as mutually divergent members of a single linguistic stock. The lexical correspondences here given are due chiefly to Dr Kroeber (some have been already noted by him in the paper referred to, others have been communicated to me since then); a few others were noted by myself.

NOUNS	
YUROK	WIYOT
<i>we-lin</i> "eye"	<i>we-lir</i> ²
<i>-tska</i> "foot"	<i>tckalit</i> "leg"
<i>we-tsawec</i> "hand"	<i>we's</i>
<i>-pel</i> "tooth"	<i>m-èpt</i> ³
<i>-welkete</i> "nail"	<i>me-ikan</i>
<i>-mol</i> "head" ⁴	<i>wat-wet</i> ⁵ (<i>wat-</i> is prefix)
<i>-luz</i> "mouth" (Coast Yurok)	<i>me-lùp</i> ⁶
<i>-werL-ker</i> "bones"	<i>wat-kerät</i>
<i>-skwet</i> "penis"	<i>dgat</i>
<i>-molox</i> "faeces"	<i>me'l</i>
<i>-tpel</i> "tail"	<i>wat-hèl</i> ⁷
<i>-LpiL</i> "leg" ⁸	<i>we-lil</i> "foot"
<i>-pil</i> "tongue" ⁹	<i>m-ìt</i> ¹⁰
<i>-pern</i> "nose" ¹¹ (-ern < *-etn)	<i>m-etere</i> (< *-etene)
<i>mets</i> "fire"	<i>mes, wes</i>
<i>hukca</i> "child"	<i>hetca</i> "baby"
<i>-etani</i> "strings of dentalium shells"	<i>reni</i> "dentalium shell currency"
(numeral classifier)	

¹ Kroeber, op. cit., p. 426.

² It may be noted once for all that Wiyot *r* is regularly *n* in origin. This is abundantly evidenced by Wiyot itself. See Kroeber, op. cit., p. 386.

³ It will be observed that Yurok *-L* frequently corresponds to Wiyot *-t* or *-l*.

⁴ Wiyot *m* and *w* often interchange. See Kroeber, op. cit., p. 385.

⁵ Note *-p-* peculiar to Yurok.

YUROK

wonoyek "sky" (*won-* "up")
puuk "deer"
tsieri "bear"
taxteL "eagle"
o'lomeL "house"
camot "bow"
pa'a "water"

WIYOT

wèn, wiru-dala "sky"
bui-caweti "white deer" (*caweti* "white")
tsetsgeruLigerer
di'ls
mol's
cwat
pāk "salt water, ocean"

VERBS AND ADJECTIVES

rurawo "to sing"
ckewok "to like"
pleli, pelil "large"

lalisw
di-cgam
bel "flat, wide"

NUMERALS

goot, go(o)xti-, qoxits-, goor- "one"
ni'-, nä'-, ne' "two"
naxkc- "three"

gō'ti-, gū'ts-
rit(w)- (< *nitw-)
rik(w)- (< *nikw-)

DEMONSTRATIVES

ku "that, the"
ki "that"

gu, gu-r, gu-ru "that"
gic "this"

YUROK

WIYOT

INDEPENDENT PRONOUNS

nek "I"
gel "thou"

yil (< *nil ?)
kil

PRONOMINAL PREFIXES

ne-, no- "my"
ge-, go "thy"
we-, (w)o- "his"
me-, m- "somebody's" (indefinite pre-
fix for body-part nouns)

ru-, r- (< *nu-, *n-)
ku-, k-
(h)u-, w-
me-, m-

GRAMMATICAL PREFIXES

kowits- negative
ki- future

ka-, ga-
ka- "imperative"; *git-ga* particle indicating futurity

GRAMMATICAL SUFFIX

-ik, -k locative noun ending

-akw

While two or three of these resemblances may be quite accidental and one or two others due to borrowing, it is difficult to believe that the bulk of them can rest on anything but genetic relationship. In estimating the value of this comparative material, it should be remembered that our knowledge of Wiyot and Yurok is still very incomplete and that therefore the total amount of lexical and grammatical material that one can work with is quite inconsiderable in extent. It is clear enough that Yurok and Wiyot are only distantly related at best, but I believe it to be no less clear that they are indeed related.

2. ALGONKIN, WIYOT, AND YUROK

LEXICAL EVIDENCE

Consider Cree *mi-skāt* "leg," *ni-skāt* "my leg," *ki-skāt* "thy leg," *o-skāt* "his leg." Similar to this is *m-ipit* "tooth," *n-ipit* "my tooth," *k-ipit* "thy tooth," *w-ipit* "his tooth." These four possessive pronominal prefixes (*m-* prefixed to body-part nouns to express indefinite possessor, "somebody's"; *n-* "my"; *k-* "thy"; *o-* or *w-* "his") are characteristic not only of Cree but of Algonkin generally. Compare Micmac *m-ilnoo* "tongue," *n-eelnoo* "my tongue," *k-eelnoo* "thy tongue," *w-eelnoo* "his tongue;" Natick *mu-sseet* "foot," *nu-sseet* "my foot," *ku-sseet* "thy foot," *wu-sseet* "his foot;" Arapaho *bä-* (< **mä-*) as body-part prefix; Ojibwa *mi-gwan* "feather," *binéssíwi-gwan* "bird's feathers;" Blackfoot *mo-χkatsis* "foot," *no-χkatsis* "my foot," *ko-χkatsis* "thy foot," *o-χkatsis* "his foot."¹

Turning to Yurok and Wiyot, we find all four of these possessive elements in each. With Cree *mi-skāt* "leg" compare such Wiyot forms as *m-a'n* "pubic hair," *me-lir* or *we-lir* "eyes," *me-lāk* "testicle;" and Yurok *m-* "someone's." With Cree *ni-skāt* "my leg" compare Wiyot *r-a'n* "my pubic hair," *ra-walkerāt* "my bones," *ru-daluwi* "my boat" (Wiyot *r-*, it will be remembered, is *n-* in origin); and Yurok *ne-*, *no-* "my." With Cree *ki-skāt* "thy leg" compare Wiyot *ke-lāk* "thy testicle," *ke-lir* "thy eye," *ku-daluwi*

¹ It is probably from such cases as a starting-point that initial *m-* of noun or verb stems came to be so often lost in Blackfoot when preceded by grammatical elements or other stems. See Uhlenbeck's papers cited below.

"thy boat;" and Yurok *qe-, go-* "thy." With Cree *o-skāt* "his leg" and *w-ipit* "his tooth" compare Wiyot *hu-watkerati'l* "his bones," *o-silakwe'l* "his pain," *we-line'l* "his eye;" and Yurok *we-, wo-, o-* "his." I fail to see how any ingenuities of mere "accident" could bring about such perfect accord in use and form of possessive pronominal elements. It was indeed these remarkable analogies that first led me to consider the possibility of Yurok and Wiyot being outlying members of the Algonkin stock. The search for further points of contact soon revealed a number of other grammatical elements held in common by Algonkin and Wiyot (or Yurok, or both) and a considerable number of lexical resemblances, some of them startling enough. I shall now, without further preliminary, present the lexical evidence.¹

PERSONS

W.² *di-wile, di-wela* "somebody, another": Cree *awiyak* "person" (? < **awilak*; Lacombe's Cree regularly has *y* where Eastern Algonkin has *l* and Ojibwa *n*)
W. *gākwil* "old man": Oj. *akiwesi* "old man"

¹ For my Algonkin forms I am indebted chiefly to A. Lacombe, *Dictionnaire de la Langue des Cris*, 1874; id., *Grammaire de la Langue des Cris*, 1874; Bishop Baraga, *A Theoretical and Practical Grammar of the Otipiwe Language*, 1878; id., *A Dictionary of the Otipiwe Language*, 1878; W. Jones, *Algonquian (Fox)*, Bureau of American Ethnology, Bulletin 40, pt. 1, pp. 735-873, 1911; S. T. Rand, *Dictionary of the Language of the Micmac Indians*, 1888; J. H. Trumbull, *Natick Dictionary*, Bureau of American Ethnology, Bulletin 25, 1903; R. Petter, *Sketch of the Cheyenne Grammar*, Memoirs of the American Anthropological Association, vol. I, pp. 443-478, 1907; C. C. Uhlenbeck, *Flexion of Substantives in Blackfoot, A Preliminary Sketch*, Verhandelingen der Koninklijke Akademie van Wetenschappen te Amsterdam, Afdeeling Letterkunde, N. R., deel XIV, no. 1, 1913; id., *De Vormen van het Blackfoot*, Verslagen en Mededeelingen der Koninklijke Akademie van Wetenschappen, Afdeeling Letterkunde, 4^e Reeks, deel XII, pp. 174-219, 1913; id., *Ontwerp van een vergelijkende Vormleer van enige Algonkintalen*, Verhandelingen der Koninklijke Akademie van Wetenschappen te Amsterdam, Afdeeling Letterkunde, N. R., deel XI, no. 3, 1910; T. Michelson, *Preliminary Report on the Linguistic Classification of Algonquian Tribes*, 28th Annual Report of the Bureau of American Ethnology, pp. 221-290b, 1912. For Arapaho I have depended chiefly on material kindly communicated to me by Dr Kroeber. In 1911 I collected short vocabularies of Delaware, Abenaki, Malecite, Micmac, Montagnais, and Rupert's House Cree; these have been used to some extent in this paper.

W.	= Wiyot	Del.	= Delaware
Y.	= Yurok	Mal.	= Malecite
Abn.	= Abenaki	Mic.	= Micmac
Ar.	= Arapaho	Mont.	= Montagnais
Bl.	= Blackfoot	Nat.	= Natick
Ch.	= Cheyenne	Oj.	= Ojibwa

- W. *mil-il* "medicine-man": Oj. *midē* "member of Grand Medicine Lodge"
- W. *tsék*, *tcik*, *tsak* "child": Bl. *tsiki* "boy" (used as vocative, according to Uhlenbeck, in speaking to small boys)
- W. *watcer* "girl": Mal. *wášiš* "child;" Mic. *medži-wádžiš* "child"
- W. *bitcò-tcker* "grandfather": Oj. *-misho-miss* "grandfather;" Cree *-muso-m* "grandfather"
- W. *där*, *dän-* "father, son": Abn. *ki-dadán'* "your father," *ō-dadan-ā'* "his father." Are Oj. *-dän-iss* "daughter;" Bl. *tann-a* "daughter," and cognates for "daughter" in other Algonkin dialects related to these words?
- W. *dök* "brother, sister": Kickapoo *-tötä-ma* "brother, sister;"¹ Cree *-tote-w* verbal suffix referring to "family"
- W. *gò-tcker* "grandmother" (for *-tcker* cf. *bitcò-tcker* above): Cree *okku-ma* "his grandmother;" Oj. *noko* "my grandmother!"; Kickapoo *nō'ko* "grandmother!";² Nat. *oku-mmes* "grandmother"
- W. *gwatc* "mother": Cree *ni-kāwiy* "my mother," *nega* (voc.); Oj. *-gā*; Bl. *ni-ksista* (< *-kista³); Nat. *nw-kas*; Mic. *n-kéch* "my mother," *oo-kwij-ül* "his mother;" Del. *nī-n-gík*⁴ "my mother"
- W. *rekā* "daughter" (< **nekā*): Kickapoo *-negwana* "son-in-law"⁵ (? = "married to daughter, having daughter as wife," cf. below Oj. *wiwan* "his wife"); Oj. *-ningwan* "son-in-law"
- W. *wetserakw* "son-in-law": Nat. *wussénüm* "he is son-in-law of," *pish ken waseenumukqueh* "thou shalt be my son-in-law," *nosénemuck* "he is my son-in-law." Nat. **wasina-m-* = W. **wetsena-*
- W. *wise-pelei* "married man," *wisi* "married woman": Oj. *ni-wish* "my wife," *wiwišan* "his wife." Cf. Fox *uwíw(i)-* "to marry;" Oj. *wiwi-ma* "to marry one," *widige* "to be married;" Cree *wiyamew* "he is married to her." With these words are related:
- W. *wiwa-l* "his wife": Oj. *wiwan* "his wife;" Kickapoo *n-iwa* "my wife;"⁶ Cree *wiwa* "his wife;" Nat. *no-weewo* "my wife"

BODY-PART NOUNS

- W. *dāu*, *tāu* "belly": Cree *m-atāy* "ventre." Less probably also related to Oj. *m-ōdji* (< **ōdi*) "belly of an animal;" Ar. *n-ot* "my belly"
- W. *dgat* "penis;" Y. *-xkwet* "penis": Cree *n-ittakāy* "mes parties génitales"
- W. *djipl-il* "beard": Ch. *mǐ-shi* "whiskers"⁷
- Y. *-erkerl* "knee": Cree *mi-kitik(w)-* "molette du genou;" Oj. *gidigw-* "knee;" Nat. *mu-kkuttuk*

¹ W. Jones in *American Anthropologist*, N.S., 15, 1913, p. 334.

² Ibid.

³ Bl. *tsi*, *ksi*, and *psi* are regularly developed from *ti*, *ki*, and *pi*.

⁴ Jones, op. cit.

⁵ Mooney, *The Cheyenne Indians*, Memoirs of the American Anthropological Association, vol. 1, p. 427.

- W. *hodilere* "umbilical cord" (*ho-* third person possessive prefix?): Oj. *-diss* "navel"
- W. *me-lāk* "testicles": Mic. *ülsöök* "testicle"
- W. *me-lokal* "throat": Nat. *mu-nnaonk* "throat"
- W. *me-lūl* "mouth;" Coast Y. *-lul* "mouth" (< **-lul*): Cree *mi-ton* "mouth;" Oj. *-dōn*; Mic. *o^z-tōn* "his mouth;" Nat. *mu-tiōn* "mouth." W. *-lūl* is perhaps assimilated from **-lūn*.
- W. *me'l* "excrement;" Y. *-molox* "faeces": Cree *miy, mey* "excrement;" Oj. *mo;* Nat. *mai, mwee* "ordure, dung"
- W. *m-ēpt* "teeth;" Y. *-pel* (< **-pet*): Cree *m-ipit* "tooth;" Oj. *-ibid*; Mic. *w-ibit¹* "his tooth;" Ar. *be-išiθ* "tooth" (< **me-ipit¹*); Nat. *w-eepit* "his tooth"
- W. *merār* "horn" (< **wenān* ?): Fox *-wind-* "horn;" Cree *-wite²* "horns of the head;" Oj. *wagi-wine* "it has crooked horns;" Nat. *weween* "horn"
- W. *m-eterē* "nose" (< **-etene*); Y. *-pern* (< **-p-etn* ?): Mic. *n-ītn* "my nose;" *w-ītn* "his nose;"³ perhaps also Cree *m-iteyikum* (< **-itelī-, -iteni-*) "nostril;" Oj. *mang-idenigome* "to have large nostrils." Is Ar. *be-iš* "nose" < **me-itn* (but cf. Ch. *-ēs* "nose" as incorporated element)?
- W. *me-ikan* "nail;" Y. *-we-łkete* "nail": Cree *mit-eskan* "horn of the head;" Oj. *eshkan* "horn;" Nat. *askon* (i. e., *eskan*); Bl. *mo-łskināu*.⁴ Related to these words are, in all probability, also Oj. *-shkanj* "nail;" Cree *misasiy*; Mic. *m-kūse*.
- W. *me-weril* "flesh, fat": Oj. *winin* "fat;" Nat. *weēs, weis* "fat;" Mic. *weoo's* "flesh;" Cree *wiyās* "flesh"
- W. *m-ii* "tongue;" Y. *-pix* (< **-p-ii*) "tongue": Ar. *be-iθan* (< **me-itān*) "tongue;" Bl. *m-atsinī* (< **m-atini* < **m-itani* by metathesis⁵); Gros Ventre *inniūnī* "tongues" (i. e. *-itAni*)⁶; Cree *mit-eyaniy* "tongue" (< **-elani*); Oj. *-ēnaniw*; Mic. *m-ilnoo*; Del. *-ilAnō*
- W. *m-okec* "fingers": Bl. *m-okūsis* "finger"
- W. *łekatc* "leg;" Y. *tska* "foot": Cree *mi-skāt* "leg;" Oj. *-kād* (< **-kāt*); Bl. *mo-χkātis* "leg, foot" (< **-χkāt-*); Mic. *An-kāt⁷* "my foot;" Nat. *mu-hkont* "leg" (i. e. *-'kant*). Observe that this stem means both "leg" and "foot" in both Algonkin and Yurok-Wishosk. There seem to be two Algonkin stems: *-skāt* (Cree) and *-kāt* (Mic., Nat.; these dialects regularly preserve original *sk*). This is confirmed by incorporated forms *-ska-* and

¹ For *tš* < *p*, see Michelson, op. cit., p. 235.

² Cree not infrequently has *t* where other Algonkin dialects have *n* or *l*. See Michelson, op. cit., p. 239.

³ Rand gives *wedoona* (1st per. *nedoon*) as "nostril."

⁴ Bl. *-łskin-* must go back to **-łskan-* or **-łkan-*, as original *ki* would have given *ksi*. Cf. Bl. *ōmaxksi-kimi* "great water" with Oj. *-gami-* "water."

⁵ Vocalic and consonantic metathesis seems to be rather common in Blackfoot. Another example of vocalic metathesis is *moksis* "awl" (< **mokis*); cf. Oj. *migōss*.

⁶ G. B. Grinnell in *American Anthropologist*, N. S., 15, 1913, p. 330.

- ka* (-*skāt*: -*ska-* = W. *tckatc*: Y. *tska*). -*ska-* is found in Fox -*sk(a)-* “with the foot” and Cree -*ska-we-w* (inanimate -*ska-m*) “with the foot;” -*ka-* is found, e. g., in Fox -*ka-* “trail” and Bl. -*ka-* “foot” (e. g. *siksika* “black-footed”).
- W. *wat-ilat* “shell” (*wat-* in this and following words is prefix): Oj. *ess* “shell;” Cree *es*
- W. *wat-kai* “skin,” *ra-watkai* “my skin”: Cree *m-asakay* “skin of the human body;” Oj. -*jagaāi*; perhaps also Bl. *m-otokis* “hide”¹
- W. *wat-kerāt* “bone,” *ra-watkerāt* “my bones;” Y. *werLker* “bones”: Cree *oskan* “bone;” Oj. -*kān* (< *-*kān*); Fox *ut-o'kan-emān*² “his bones;” Nat. *m-uskon* “bone;” Bl. *oxkin* (< **oskan*). Besides **oskan* (and its reflex *o'kan*, -*'kan*), we find also -*kan-* (-*gan-*) as incorporated element: Cree -*gānā-m-ew* “action sur les os, en frappant;” Oj. *sābi-gane* “to have strong bones.” This suggests that *os-* (> **ox-*, *o'-*) may be a prefixed element cognate with W. *wat-*, Y. *werL-* (-*tk-* > -*sk-*; see *metkan* above). Cf. *werlkun* below.
- W. *wat-melok* “ear” (stem -*lok*): Cree *mi-ttāwokay* “ear” (incorporated -*ttāwoke-*); Nat. *mē-hitāuog*; Mont. *u-tuki* “his ear;” Bl. *mo-xtlōkis* “ear”
- W. *wat-ðlk* “fin”: Cree *mit-oskwan* “tail;” Oj. *ojigwan* “tail of a fish;” Nat. *w-ussukqun* “his tail”
- W. *wat-wet* “head;” Y. -*mol* (< *-*wot?*): Mic. *windéi* “head,” *n-úndéi* “my head” (< **windi*, *-*undi*). It is somewhat doubtful if Oj. *wijigan* “skull” and Fox *u-wīcī* “his head” are related to these Mic. forms.
- Y. *werlkun* “liver”: Cree *oskun* “liver;” Oj. -*kōn* (< *-*kōn* < *-*skōn*); Mic. *ooskoo'n*; Nat. *m-ushqun*. For Algonkin *os-*: Y. *werL-* cf. *wat-kerāt* above.
- W. *we-ser* (< *-*sen*) “woman's breast”: Ar. *be-θenī* “breast,” *be-θenetš* (= -*θen-neiš* “breast-water”) “milk”²
- W. *we-s'* “hand;” Y. *we-tsewec*: Bl. *mo-tsīs* “hand;” Ar. *bā-tcet*; Cree *mi-tchichiy*. Ar. -*tce* seems to indicate that Algonkin *tc* remains in Ar.; where Ar. has *θ* and Fox *tc*, we seem to be dealing with Algonkin *tc* after or before *i* or *t* palatalized in Fox to *tc* before *i* (cf. Ar. -*ilšiθ* “tooth” and -*iθan* “tongue,” in both of which *θ* < *t* after *i*).

ANIMALS

- W. *bōtciwi*, *būtciwi* “skunk”: Mal. *abik'tsīlō* “skunk”
- W. *hōlakw*, *hālakw* “deer”: Oj. *añk* “deer,” plur. *añkwag*; Nat. *ahtuk*
- W. *hēikw* “louse”: Oj. *ikwa* “louse;” Cree *ikkwa*; perhaps also -*kw* of Mic. *waakw* “louse”

¹ Does -*ki-* go back to *-*kai-*? Original -*ki-* would have become -*ksi-*.

² Pointed out by Kroeber.

³ Michelson's sole example (op. cit., p. 235) is Fox -*nitcī*: Ar. -*niθ*. That Fox conjunctive -*tcī* is here <*-*tī* is indicated by corresponding subjunctive -*te* and participial -*ta*.

- W. *mākw* "grizzly bear": Cree *maskwa* "bear;" Fox *má'kw*; Oj. *makwa*; Nat. *masq*
- W. *me'lakuw* "elk": Oj. *mons* "moose"
- W. *mirel* "angleworm": Cree *mottew* "worm;" Oj. *mösse* "worm (of wood);;" perhaps also Mic. *wēte* "worm"
- W. *pāne'r* "crane": Oj. *biné* "partridge," *binéshī* "small bird," *binéssi* "large bird"; Cree *pihyew* "partridge"
- Y. *wergec* "fox": Oj. *wāgosh* "fox;" Nat. *wonkuéssis*; Mic. *wokwis*

PLANTS

- Y. *käpel* "brush": Oj. *kibinsan* "shrub, bush"
- W. *mukwetí* "pine": Oj. *amikwandag* "white pine"
- W. *tālew-iL*, *tāleg'-iL* "tree": Gros Ventre *tānōn* "tree"¹
- W. *we'taw* "salmon-berry": Del. *'wiāhīm*^a "strawberry;" Oj. *odéi-min*
- W. *wētcac* "buds": Oj. *wanimik* "bud;" or though perhaps less probable, Mic. *wiskūsōk* "bud"
- W. *wit* "alder": Oj. *wadōp* "alder-tree"

NATURAL OBJECTS

- W. *gitcai-aikokwe* "sun" (cf. *ritsowel-aikokwe* "moon"): Oj. *gisiss* "sun, moon;" Ar. *hīsīs* (< **kīsīs*) "sun, moon;" perhaps also Ch. *ešēva* "daily" (-(*e*)vā is locative). Should Oj. *gijig* "day, sky" not be related to W. *kēk* (q. v.), *gitcai-* is perhaps to be put rather with Oj. *gijig* than with *gisiss*.
- Y. *ha'äi(gon)* "rock": Ar. *haha'ana'kān* "rock"²
- W. *hērw* "snow": Ch. *hīstūs* "snow"³
- W. *kēk* "clear sky": Oj. *gijig* "day, sky;" Cree *kijik*, plur. *kijikwa*, *kijikaw* "it is day;" Nat. *kesuk* "day, sunlight;" Mic. -*giskuk* "day," in compounds only. W. *kēk* would seem to imply **kisk* (cf. Mic. -*gisk-*); for Oj. *gijig sk* (Fox 'k) cf. Oj. *bimi-najikawa* "to pursue": Fox *-ne'ka-* "to drive, pursue." See *gitcai*- above.
- W. *letkak* "sand": Oj. *nēgaw* "sand;" Cree *(t)yeckaw* (< **lekwaw*)
- Y. *lzel* "earth": Cree *askiy* "earth;" Oj. *akki*; Nat. *ohke* (i. e. *a'ki*); Fox *a'ki'*
- W. *māti* "wood": Cree *mistik* (plur. *mistikwok*, *mistikwa*) "tree, piece of wood;" Oj. *mitig* "tree;" Fox *me'tigw-*; Nat. *mehtug(q)*; Bl. *mistsis* "stick" (< **misti-s*; -s is suffix, as shown by *nits-istsi-m* "my stick"); Ch. *mata* "timber, wood." Bl. and Ch. are interesting as implying Algonkin stem **misti* or **masti* without -*kw*- suffix of other Algonkin dialects; this goes well with W. *māti*.
- W. *mes, wes* "fire;" Y. *metc* "fire": Oj. *mishi* "piece of wood for fuel," *missan* "wood for fuel;" Nat. *mishash* (Nat. -*ash* and Oj. -*an* are inanimate plur.)

¹ G. B. Grinnell in *American Anthropologist*, N.S., 15, 1913, p. 328.

² Pointed out by Kroeber.

³ J. Mooney, op. cit., p. 427.

- "wood;" Ar. *bäθ* (< *mäs) "wood." Is Cree *mitti* "firewood" also related? There are numerous examples in America of "firewood" derived from or identical with "fire."
- W. *pāk* "salt water, ocean;" Y. *pa'a* "water": Gros Ventre *wāhāh* "water"
- W. *pātūt* "earth, soil": Ar. *bīta'tāwū* "earth"
- W. *p'lēk*, *p'lēs* "rock": Mal. *p'Anāpsk'*^w "stone;" perhaps also Mic. *-pskēk* "rock" in compounds, which, however, seems rather to correspond to Mal. *-psk'*^w.
- Y. *pontet* "ash": Oj. *pingwi*, *pangwi* "ashes;" Cree *pihkhow*; Nat. *pukquee*
- Y. *rokw* "wind": Oj. *nōdin* "wind;" Cree *yōtin* (< *lōtin) "wind blows"
- W. *wèn*, *wiru-dala* (< *winu-) "sky," *gotsō-wèn* "day"; Y. *wonoyek* "sky," *wonu-clei* "sun, moon": Ch. *voe* "sky" (Ch. *v* < Algonkin *w*; cf. Ch. -ōva- "referring to water": Cree -ābāwa- "by means of water;" *nevă* "four": Fox *nyāw*ⁱ). Kroeber connects Y. *wono-* with *won-* "up," with which is perhaps to be compared Oj. *wanako-* of *wanakong* "at top or head of tree," *wanakowin* "top, extremity." *wanakodjaonag* "foremost part of canoe."

OBJECTS MADE BY MAN

- W. *cwat* "bow;" Y. *camot*; Coast Yurok *cmoxter*, *cmahater*: Fox *me'täⁱ* "bow;" Ar. *bātā* (< *mātā).³ If these etymologies are correct, *c(a)-* of W. and Y. would seem to be a prefix.
- Y. *horäu* "arrow": Ar. *hoti* "arrow;" Cree *atus*; Oj. *mitigw-anwi* (*mitigw-* "wood")
- W. *mol* "house;" Y. *o'lomeL*: Bl. *moyis* "hut;" Gros Ventre *-wū*', *-wūh'* "lodge;"⁴ Ar. *ha'ānwū* "house," *-anwu* "lodge" (-*wu* < -*mu; cf. *woxw* "bear": Cree *maskwa*)
- Y. *nasko* "board": Cree *nabakittak* "board;" Oj. *nabagissag*
- W. *tsāpi* "arrow": Bl. *āpssí* "arrow" (< *api), *nō-xpssí* "my arrow." Fox *n-īpⁱ* "my arrow;" Ar. *n-ētⁱ* "my arrow." If these etymologies are correct, W. *ts-* is a prefix.
- W. *kac-werar* "small house" (< *-winan): Mal. *weno'djīgwəm'* "house"; Mic. *wéndzīgwōm'*; Ar. *nīnaⁿ* "house" (< *wīnaⁿ? cf. Ar. *noⁿku* "rabbit": Oj. *wābos*)

VERB AND ADJECTIVE STEMS

- W. *ate-l*, *ane-l*, *hane-w*; *ie-l* "to say, tell": Cree *ite-w* "il lui dit," *itwe-w* "il dit," *itwe-win* "word;" Oj. *nind-inā* "I tell him"
- W. *gawe-beser* "it is becoming dry" (*gawe-* inchoative): Oj. *bā-ss* "to be, become dry," *bā-tte* "it is dry;" Cree *pā-swew* "he dries it"

¹ G. B. Grinnell in *American Anthropologist*, N.S., 15, 1913, p. 328.

² Suggested by Kroeber.

³ Noted by Kroeber.

⁴ G. B. Grinnell in *American Anthropologist*, N.S., 15, 1913, p. 329.

⁵ See Michelson, op. cit., p. 235.

- W. *bitcewe-tskarer* "to peel": Oj. *bishagi-bina* "to peel, pare, shell, flay"
- W. *bokin* "to hit, strike": Fox *paga*, *pagi-* "to strike;" Oj. *pakitē-*
- W. *butc* "to scratch": Cree *pes-* "tracer, tirer des lignes"
- W. *cawk* "sick, to die": Oj. *ākos* "to be sick"
- W. *capo* "straight": Nat. *sampui* "it is straight"
- W. *dokap, dokaw* "to crack": Oj. *tashka* "to split"
- W. *gets* "cold": Cree *kissin* "it is cold;" Oj. *kissina* "it is cold"
- W. *gos-wiwi* "to swim": Cree *kosāpew* "il enfonce dans l'eau"
- W. *it, w-it, n-it* "to sleep, dream": Cree *itābat-* "to dream;" Oj. *ināban-*
- W. *kac, kacam* "small, short": Oj. *agāshi* "small;" Ch. *ka-* "short"
- W. *hi-kāwaw-iL* (*hi-* denotes past time) "they cut it (dead body) up;" Oj. *gawa-*
"to cut down (tree); Fox *kāwa-* "to crunch"
- W. *kiedal* "to take, pick": Cree *kitti-new* "il y met la main"
- W. *kika* "red": Bl. *ksik-* (< **kik-*) "white"
- W. *klet* "hot": Oj. *kij-āte* "it is hot;" Ar. *hā-sitā^a* "it is hot" (< **kāsi-1*)
- W. *ko-mal*, (perhaps also) *da-kwes* "to hang": Cree *kosā-we* "to hang," *ako-tew*
"he hangs it;" Oj. *ago-* "to hang (tr.);" Nat. (*h*)*ogkw-chin* "it hangs, is
suspended"
- W. (*hi-ka*)-*kuwèyél-(iL)* "(were not) afraid any longer": Fox *ku-* "to fear;" Oj.
go-; Cree *ku-s-*
- W. *lakwet* "to cough": Mal. *nēk^w-hamq-* "to cough;" Mic. *nō'yum^w*
- W. *lalisw* "to sing;" Y. *rurawo*: Mal. *dlin't* (or *dlin' tq-*) "to sing;" Abn. *lin't q^w*
"sing!" (probably from *dl-*). Such forms as Abn. *kwāwadzint^q-* "to
begin to sing," *dabidakwin^{t q}-* "to finish singing," Mal. *?mīmadjen.^{t q}-*
"to begin to sing," *e'kwin^{t q}-* "to stop singing" show that (*d*)*lin^{t q}-* is
compounded of *dli-* and *-n^{t q}-*. It is with this *dli-* (< **dli-*?) that W. *lali-*
is probably to be compared.
- W. *letka* "to fall, descend": Cree *nitta-kusiw* "to descend," *nitti-new* "he lowers
it"
- W. *ha-lewu, o-lewu, do-lewu* "to dance": Fox *nīmi-* "to dance;" Cree *nīmi-w*;
Oj. *nim*; Mic. *nēmal'kai* "I dance"
- W. *leriwoke-tskarer* "to peel": Cree *siniku-* "frictionner, frotter, essuyer-
brosser;" Oj. *sinigo-* "to rub"
- W. *miw-* "to eat (slain animal)": Oj. *amwa* "to eat (animate object); Fox *amw-*
"to eat;" Ch. *mir* (< **miw*) "to eat (e. g. human flesh)"²
- Y. *new, neg'wo* (i. e. *neywo* = *newwo*, according to Kroeber) "to see": Fox *nāw-*,
nāu- "to see;" Del. *nāwāw^a* "I see him"
- W. *niewom* "to kill," *hi-nīewa-k* "he killed him": Cree *nipa-* "to kill;" Mal.
nē'pa-. Is Del. *ni'l-* of *ni'lāwa-* "to kill" related?
- Y. *ok* "to live, be" (Wat.): Fox (*u*)*wīgi-*, (*u*)*wīge-* "to dwell"
- W. *pelat* "to break, open, cut": Cree *payipa* (< **pali-?*) "percer de part en part"

¹ See Michelson, op. cit., p. 235.

² J. Mooney, op. cit., p. 426.

- W. *picar* "to swell": Cree *pisakusiw* "il est abondant, il fournit beaucoup"
 Y. *gogonewuz* (reduplicated) "long": Cree *kino-*, *kinw-* "long;" Oj. *gino-*, *ginw-*
 W. *rakcem* "to pursue": Fox *nag-* "to follow after"
 W. *siswa* "black": Bl. *sik-* "black"
 W. *tawal, daku* "dead, to die": Fox *täw(i)-* verb stem indicating "physical pain"
 W. *tawi* "to butcher": Nat. *tumm-ussum, tumm-ehtam* "he cuts (it) off"
 W. *tawik-wi* "to visit": Fox *nawi-* "to visit"
 W. *tem* "to sit": Del. *lúm*"*l'-api* "to be seated"
 W. *tigelis-wi* "to swim": Mic. *degišim-* "to swim, bathe"
 Y. *tmo* "to shoot with bow" (Wat.): Fox *pemw(u)-* "to shoot." If this is
 correct, Y. *tmo* would seem to be dissimilated from **pmo*.
 W. *twe-Layer* "to cut, notch": Cree *twā-hwew* "he makes a hole in it"
 W. *tsaw* "to touch": Cree *sāmi-new* "to touch"
 W. *tsuisir* "to sneeze": Cree *tchatchā-mow* "he sneezes"
 Y. *tsiyuk, atsiyuqw, atsiyūuk* "to sit": Ar. *bioku* "to sit" (cf. *θia"ku* "to stand");
 perhaps also Bl. *itsistoxk-* "(to do) while lying"
 W. *tsowes* "to shout": Cree *sākowe-w, sā-sāskwe-w* "he cries out with joy;" Oj.
sa-sākwe "to shout with joy"
 W. *wal, mal, pl* "to eat": Fox *wiseni-* "to eat;" Oj. *wissin*
 W. *wayit* "to bend": Oj. *wāgina* "to bend;" Cree *wāki-siw* "he is bent"
 Y. *we'ona* "sky": Cree *wās-* "clair, lumineux, brillant," *wāseskwān* "le ciel,
 le temps est clair"
 W. *welu, wilu* "hollow": Cree *wayā-hew* (< **wal-*) "he hollows it," *wāti* "hole
 in the earth," *wāyi-siw* "hollow (inanimate);;" Oj. *wānike* "to dig a hole
 in the ground;" Mic. *wöl-bēgādākun* "to be hollow," *wöl-kobākum* "to
 make a hollow in the ground" (i. e. *wal-*)
 Y. *hèL-wenóo-c* "give me" (stem *we-noo-*): Cree *mi-yew* "he gives him;" Oj.
mi-na "to give him;" Ar. *bī-n-* (< **mī-*) "to give;" Fox *mi-n-*
 W. *weratc* "to drink," *weratči* "water": Cree *minikkw-* "to drink;" Oj. *minikwe*;
 Del. *min'ā-*; Ar. *bānā*
 W. *wet* "satisfied," *witā'w-iL* "he rejoiced": Fox *metā-* "to take pleasure in;"
 Cree *miyā-wātew* "il en est content"

It is very important to notice that several Algonkin secondary
 verb stems (i. e. such as occur only compounded with preceding
 stems) seem to be cognate with Wiyot primary stems. It is quite
 likely on general principles, in view of the fact that several initial
 stems may be compounded in Algonkin, that many, if not all, such
 secondary stems are in origin primary stems that came to be
 restricted to a secondary place in compounds. Once in a while,
 indeed, one finds that a stem which is primary in one Algonkin dia-
 lect can be used only as a secondary stem in another. Thus

Baraga gives Oj. *nin gābaw* for "I stand," *nin gābawia* for "I make him stand," while Lacombe defines *-kābawi-w* in Cree as "une terminaison qui désigne: se tenir debout;" similarly, in Fox, Jones lists *-gāpā-* "to stand" as a secondary stem (of the second order). The examples so far discovered of Wiyot primary stems corresponding to Algonkin secondary ones are:

- W. *inag'* "to think": Oj. *-en(i)-* "to think" (e. g. *in-en-dam* "to think of it," *takwendam* "to think always of it"); Fox *-äne-* "relates to mental operation;" Cree *it-eyi-mew* "il le pense ainsi;" Nat. *-an-* (e. g. *an-an-tam*, *un-an-tam* "he thinks," *miss-an-tam* "he thinks much")
- W. *kawi* "to make": Bl. *-ka-, -xka-, -xka-* "to make something;" Cree *-kke-*
- W. *zephai* "to taste": Cree *-spo-ku*, *-spi-te* "it tastes so and so;" Oj. *mino-pi-djige* "to find a good taste" (*-pi- < *-'pi < *-spi*)
- W. *otw* "to bring": Cree *-towat-ew* (ending of neuter verbs) "un fardeau, un poids, qu'on porte sur son dos;" Fox *-ō-* "to bring, carry a burden on one's back;" Oj. *-ō-*
- W. *unas* "to crawl": Fox *-ōtā-* "to crawl"

NUMERALS

- W. *go't-*, *gu'ts-* "one;" Y. *qoot-*, *go(o)xt-*, *goor-*: Fox *néguit* "one;" Oj. *ningoto-*; Nat. *nequi*; Bl. *nitúkska* < **nituki-* < **nikuti-¹*. Is original Algonkin *-got-* modified to *-ni-got-* by analogy of other numerals beginning with *n-?*²
- W. *rit(w)-* (< **nitw-*) "two;" Y. *ni'-*, *nä'-*, *ne'-*: Cree *nijo*, *nijw-* "two;" Fox *nīcw-*; Ar. *nīši*; Oj. *nij*; Abn. *n s'*; Ch. *nixă* "two," *niš* "two of;" Bl. *nátoka* "two." Algonkin **nicw-* may have been developed from **nitw-* (cf. W.) as original *-tk-* developed to *-ck-*, *-sk-* (see part 4 of this paper). Originally, antevocalic **nicw-* may be supposed to have varied with anteconsonantal **nito-*; this is confirmed by Bl. *náto-ka* with its otherwise mysterious *-t-* (*-ka* suffixed as in *nitúks-ka* "one" and *nínóks-ka* "three").
- W. *rik(w)-* (< **nikw-*) "three;" Y. *naxkc-*: Cree *nisto*, *nistw-* "three;" Fox *nésuwⁱ*; Ar. *näśd*; Oj. *nissos-*, *nisswi*; Abn. *näs'*; Ch. *näă* "three," *nahe* "three of" (-*h-* < *-s-*); Bl. *niuókska*, *niuóka* (i. e. **niwoki-?*). W. *-kw-* and Algonkin *-sw-* (e. g. Fox) and *-stw-* (e. g. Cree) point to original final *-w-* of stem; W. *-kw-*, Y. *-xkc-* and Bl. *niuok-* point to *-k-* as part of final consonant cluster;³ Y. *-xkc-* and Algonkin *-sw-*, *-stw-* point to *-s-* as

¹ Another example of consonantal metathesis, if metathesis indeed is involved here, seems to be *matsikín* "moccasin" < **masikan* < **makisan*; cf. Cree *maskisin* Oj. *makisín*.

² Perhaps Algonkin "one" without *n-* prefix is preserved in Abn. *kwid-ä's* "six," e., "one and five" (cf. below under W. *hälü* "seven").

³ Mic. inanimate *näśiskül* (i. e. *nëśiskäl*; *-Al* is inanimate plural) also suggests original *-k-*. *-sisk-* < **-siks(w)-*, assimilated from **-niks(w)-* (see below). How explain *në-*? Cf. Algonkin *nI-got-*?

original member of this cluster also. Perhaps original **niksw-* (with loss of *-w-* in Y. and of *-s-* in W.) lies back of all our forms; Algonkin *-stw-* may be supposed to have developed from *-ksw-* (in those dialects that do not preserve *-st-*, *-stw-* developed to *-sw-*; that all Algonkin dialects originally had *-stw-*, and that *-sw-*, *-s-* did not directly develop from *-ksw-* by loss of *k* is indicated by Mic. *s̄s̄t'*, assimilated from **n̄st'*).

- W. *riaw-*, *rām-* "four" (< **niauw-*): Cree *newo* "four;" Fox *nyāw'*; Oj. *niwin*; Mic. *néu*; Abn. *'yau'* (animate *'yāw'-ak'*); Ch. *nevā*; Ar. *yēini* (*y-* < *ny-*; cf. *yāθani* "five": Fox *nyānānw'*). Bl. *nīso* "four" does not fit well with Algonkin **n̄ew-*; perhaps it is to be more closely connected with:
- Y. *toon-, tsoon-* "four" (perhaps < **toson-*, cf. *tāmaw-* below; this may be dis-similated from **noson-* < **nison-* or **nison-*): Bl. *nīs(o)ō*, *nīso* "four"
- W. *hālu* "seven": Mic. *eluwigínAk'* "seven;" Fox *nōhig'* (for *-g'* cf. also *nēgutwācig'* "six" and *nēcwācig'* "eight," probably also *cāg'* "nine;" *nō-* < **inō-*, cf. *néniw'* "man" alongside of *inéniw'*). Fox *nōhi-* corresponds to Mic. *eluwi-*. Most Algonkin dialects have 2 + 5 for 7: Oj. *nījw-āsso-*; Mont. *nījw-ō'stš*; Rupert's House Cree *nīs-ōs*; Nat. *nes-āsusuk tahshe*; Ch. *nis-oxtōā*; Ar. *nis-a'*; Abn. *daba-ōs* (< **dabo-As*; cf. *kwid-As* "six" and Mic. *dābō'* "two"). W. *hālu*, Fox *nō(hi)-*, and Mic. *elu(wi)-* seem to point to an older stem for "seven" not based on a quinary system.

Two or three other elements of indefinite numerical significance may be included here:

- W. *daru* "all" (also as verb prefix *ru-*): Cree *tatto*, *tattw-aw* "each, every"
- Y. *qđlin* "the other": Cree *kutak* "another;" Fox *kutag-*; Nat. *on-katog* "another person"
- Y. *kuc tsāme-L* "how many?" *kuc tāmaw-o* "how many months?" *kuc tamopir* "how many dentalia?" *kuc termerw-er* "how many woodpecker scalps?" (assimilated from **tamaw-er*), *kuc termerpi* "how many obsidian blades?" (assimilated from **tam(aw)-erpi*) (*kuc* is "what?" whence *tamaw-* can be inferred to mean "as much as, so and so many in number;" for *ts-:* *t-* cf. *tsoon-:* *toon-* "four" above, perhaps implying original stem **tasm(aw)-:* Oj. *dassw(i)-* "so and so many" (used with numeral classifiers); Fox *tasw(i)-* "as many as, as much as, number." With Y. *termerpi* cf. Oj. *dassw-ābik* "so and so many objects of metal, stone, or glass."

LOCAL TERMS

- W. *dat* "up, above": Cree *tett-* "to be over" (*tettahyw* "he puts it above," *tettapiw* "he is seated over")
- Y. *pets-ik* "up stream" (-*ik* is locative): Mic. *petow* "up stream"
- Y. *pul-ik*, *puleku-k* "down stream": Mic. *b&p-kāk* "down stream" (cf. perhaps Cree *māmik* "bas d'une rivière")
- W. *tcalc* "south": Cree *sāwan* "south;" Oj. *jāwan*; Nat. *sowanáyeu*

W. *tcwi* "behind;" Y. *hé-lqäü-* verb prefix "in the rear" (Wat.) (*he-* is demonstrative; *-lqäü-* < **lqw-*, cf. Y. *horäu* "arrow" < **hotw*): Oj. *ishkwi* "to remain (behind)," *ishkwa* "after, at the end of something," *ishkweiang* "behind the others;" Cree *iskw-* "the last, at the end, in the last place;" Nat. *ashq-* (i. e. *ackw-*) in *ashqshout* "he who remains," *ashqunut* "he who is left;" Mic. *eskw-* in *eskwaadoo* "I let it remain," *eskweak* "to remain." Primitive Algonkin **ckw(i)-*, **skw(i)-*, variable vowel *i-*, *a-*, *e-* being presumably prefixed merely to support consonant cluster.

W. *wa* "far": Oj. *wässa* "far;" Cree *wäyo*

W. *wur* "north" (< **mon?*): Ch. *notam* "north" (perhaps dissimilated from **motam*; cf. na'ko "bear" < **ma'kw-*)

PRONOUNS

Y. *hi-*, *he-* (Wat.) demonstrative stem compounded with local adverbs used as verb prefixes (e. g. *higwop* "in front floating," *hipets* "up stream," *hélgäü* "in the rear," *héci* "this side of") : Fox *i-* of *ina* "that" (anim.) *ini* (inanim.) (-na as in *mana* "this"); perhaps also *i-* of Fox *ici* "thus," Cree *it-*, Oj. *in-*

Y. *iyo, yok* "this," plur. *iyołko*: Cree *eoko* "ce, celui-ci," plur. *eokonik*; Oj. *iw, iwi* "that;" Nat. *yey* "this (thing)," animate *yeuoh*, animate plur. *yeug*

W. *tci-wa* "that; so, thus;" perhaps also Y. *hé-ci* "this side of" (Wat.) (*he-* is demonstrative): Cree *tche-skwa* "ci-après" (for -*skwa*, see W. *tcwi* "behind"); perhaps also Fox *ici*- "thus"

Y. *kuc* "what? where?": Fox *-gu-* in *wägunä*i** "what (inanimate)?" (cf. *wänä*a** "who?")

Y. *tin* interrogative pronominal stem in *tinica* "what? what kind?" *tinpa* "which one?": Cree *tän-* interrogative pronominal stem in *tänisi* "how? of what kind?" *täneki* "why?" *täntatto* "how much?" *tänispí* "when?"; Fox *tän* "which (animate singular)?"; Bl. *táa* (animate singular) "which? being where?"

W. *-wa* in *du-wa* "what?" *ci-wa* "what?" *wai* "is that so?": Oj. *wa* "what?" (in answer to questions); Ch. *-vā, -va* in *nevā* "who?" *henova* "what is it?"

Y. *nek* "I;" W. *yil* (< **nil?*): Cree *niya* "I" (< **nila*); Fox *nín*^a; Oj. *nin*; Nat. *neen*; Mic. *neen* (assimilated from **nil*); Mal. *nil*

W. *kil* "thou;" Y. *qel*: Cree *kiya* "thou" (< **kila*); Fox *kīn*^a; Oj. *kin*; Nat. *keen*; Mic. *keel*; Mal. *kil*

W. *hinär, winär* "we" (< **nän*; are these two forms inclusive and exclusive?): Cree *kiyānow* (inclusive), *niyān*, *niyanān* (exclusive); Fox *kínān*^a, *nínān*^a; Oj. *kinawind*, *ninawind*; Nat. *keenawun*, *neenawun*; Mic. *keenoo*, *nenēn*; cf. also *-nāna* and *-nūna* of Bl. *nistúnāna*, *ksistúnāna* (these are really possessive forms of stem *-stu-*)

W. *kiluwa* "you (pl.)": Cree *kiyawaw* "you (pl.)" (< **kilawaw*); Fox *kínwāw*^a; Oj. *kinawa*; Nat. *kenauau*; Mic. *kelow*; cf. also Bl. *-aua* (= W. *-wa*) in *ksistóaua* (really possessive form of stem *-sto-*)

3. ALGONKIN, WIYOT, AND YUROK MORPHOLOGICAL EVIDENCE

We shall begin by taking up the various grammatical elements that Algonkin has in common with Wiyot or Yurok or both.

POSSESSIVE PRONOMINAL PREFIXES

- W. *r-*, *ru-*, *ra-* (< **n-*, **nu-*, **na-*); *yi-* (before terms of relationship; < **ni-?*) “my;” Y. *ne-*, *no-*: Cree *n-*, *ni-*, *nt-* “my”; Fox *n-*, *ne-*, *net-*; Oj. *ni-*, *nin-*, *nind-*; Mic. *n-*, *an-*; Nat. *n-*, *nu* (= *na-*); Bl. *n-*, *ni-*, *nit(s)-*, *no-*. *-t-* forms (Bl. *-t-* or *-ts-* forms) are used before stems beginning with vowels. This *-t-* seems comparable to *-d-* of W. *ru-d-aluwi* “my boat” (*haluw?* “boat”), probably also *d-* of *d-etere* “my nose” (*m-etere* “nose”).
- W. *k-*, *ku-*, “thy;” Y. *qe-*, *go-*: Cree *k-*, *ki-*, *kit-* “thy;” Fox *k-*, *ke-*, *ket-*; Oj. *ki-*, *kid-*; Mic. *k-*, *ük-* (i. e. *ak-*); Nat. *k-*, *ku-* (i. e. *ka-*); Bl. *k-*, *ki-*, *kit(s)-*, *ko-*, Ar. *hi-* (< **ki-*). *-t-* forms (Bl. *-t-* or *-ts-* forms) are used before stems beginning with vowels. This *-t-* seems comparable to *-d-* of W. *ku-d-aluwi* “your boat.”
- W. *hu-*, *o-*, *w-* third person possessive pronominal prefix, singular or plural, “his;” Y. *we-*, *wo-*, *o-*: Cree *o(t)-*, *w-*; Fox *u(t)-*; Oj. *o(d)-*, *w-*; Mic. *o-*, *w-*; Nat. *w-*, *wu-* (i. e. *wa-*); Bl. *o-*, *ot(s)-*, *m-*.
- W. *m-*, *me-* body-part prefix, “somebody’s;” Y. *m-*: Cree *m-*, *mi-*; Oj. *mi-*; Mic. *m-*, *'m-* (i. e. *am-*); Nat. *m-*, *mu-* (i. e. *ma-*); Bl. *m-*; Ar. *bä-* (< **mä-*). See beginning of part 2.
- W. *wat-* body-part prefix (e. g. *wat-kerāt* “bone,” *wat-melok* “ear,” *ra-wat-kai* “my skin”); Y. *werl-* (e. g. *-werlker* “bone,” *-werlkun* “liver”): Cree *os-* of certain body-part nouns (e. g. *os-kan* “bone,” *os-kun* “liver”), see part 2 s. v. *wat-kerāt*. Certain body-part nouns in Arapaho are preceded by *wa-* (*wan-?*): *wa-natana'* (read *wan-atana?*) “ear,” *wa-not* (read *wan-ot?* cf. Oj. *m-ōdji* < **m-ōdi* “belly of an animal”) “belly,” *wa-a'θ* “foot.” It is tempting to compare this *wa(n)-* with W. *wat-*, though Kroeber suggests it may be another form of *bä-* (see under *m-*).

TENSE-MODE VERB PREFIXES

- W. *hi-* prefix of ordinary past: Ch. *-t-* prefix indicating past time (e. g. *na'-mese* “I ate”: *na-mese* “I eat”)
- W. *ka-*, *ga-* negative (e. g. *guts-ká-nakw* “it is not good,” *hi-ka-kuwèyéli* “were not afraid any longer”); Y. *kowits-*: Oj. *ka-* “not,” *kawin* as independent adverb; Ar. *hāwə* (< **kāwə*); Cree *eka* (only with subjunctive forms)
- W. *ka-* prefix which, together with suffix *-iyya*, forms imperatives of some verbs (e. g. *ka-lal-izya* “jump!”); Y. *ki-* future prefix, *kiti-* (Wat.) “impending action”: Cree *ka-*, *kata-*, *kita-* future prefixes; Oj. *ga-*, *gad-*. With Cree *kita-* is perhaps also to be compared *git-* of W. *gitga*, particle indicating futurity.

Y. *ki-* "incomplete action" (Wat.): Cree *ki-* prefix of past time

Y. *matseki-* "if" (-*ki-* is perhaps future prefix): Ch. *ma* "if, when"

Y. *nimi-, nimok-* negative: Cree *nama, nama-* "not"

W. *wi-, wa-* future prefix: Fox *wi-* future prefix; Cree *wi-* "signe de la volonté; être sur le point de"

ADVERBIAL VERB PREFIXES

(comprising also elements best considered as initial verb stems in Algonkin)

W. *dakw-* in *dákw-darúdakw* "they are with (their grandmother)": Fox *tagw(i)-* "together;" Oj. *dago-* "amongst others, amongst other things"

W. *gawe-, gawu* inchoative prefix: Abn. *kwáwdadzi-* "to begin to" (e. g. *kwáwdadzinlo-* "to begin to sing;" also *hwadzizi-*)

Y. *kits-* prefix indicating completed past: Cree *kisi-* or *kiji-* "to finish;" Fox *kic(i)-* "to finish;" Bl. *-ksist(s)-* perfective prefix (< **kisi-*)

W. *kul-* "back, again": Cree *kiwe-w* "he returns to his own place," *kiwe-hu-yew* "he takes him back to his country"

W. *let-* prefix defined by Kroeber as "apparently defining motion in some way" (perhaps circular motion is implied: *let-kaleg'äl-iL* "roll," *dak-let-athanagat* "boil violently," *let-kalegal* "fall"¹): Fox *tetep-* "to move in a circle"

Y. *tsegí-* "all" (Wat.): Fox *tcägi-* "all, entirely"

PRONOMINAL SUFFIXES

W. *-e'l* third person (singular or plural) possessive suffix (e. g. *we-lin-e'l* "his eye," *hu-watkerat-i'l* "his bones"): Fox *-anⁱ* (obviative ending); Oj. *-an*; Mal. *-äl'*; Mic. *-ül* (i. e. *-äl*). Algonkin noun forms with third person possessive prefix normally end in obviative **-ali*; thus, Oj. *o-siniss-an* "his father-in-law" (cf. *ki-siniss* "thy father-in-law"). Is W. *-e'l* really obviative, and is W. *hu- . . . -e'l*: Algonkin **o- . . . -ali* more than accidental?

Y. *-k* "I" (subjective): Fox *-gⁱ* "I" in *-a-gi* "him—I" (conjunctive mode); Cree *-a-k* "him—I" (subjunctive-participle), *-a-ki-k* "them—I;" Oj. *-a-g* "him—I" (subjunctive)

Y. *-m* "thou" (subjective): Oj. *-m* "you (plur.)" (indicative mode; < **-mwa*, as indicated by imperfect *-mwa-ban*; this *-mwa* may be compounded of original *-m-* "thou," no longer preserved as such, and *-wa*, second person plural suffix, seen, e. g., in Oj. *ki- . . . -wa* "your" and *-wa* of W. *kilu-wa* "you" and *-itawa*, see below); Algonkin *-mwa* appears in several dialects as *-pwa* (e. g. Fox and Bl.).

W. *-it, -at* "thou" (subjective): Fox *-tci* (< **-ti*) in *-a-tci* "him—thou" (conjunctive), *-te* in *-a-te* "him—thou" (subjunctive); Cree *-a-t* "him—thou" (subjunctive-participle); Oj. *-a-d* "him—thou" (subjunctive)

W. *-itak, -atak* "we" (subjective): Fox *-yäge* "we (exclusive)" (conjunctive); Cree *-yak* (subjunctive-participle); Oj. *-iang* (subjunctive)

¹ But see part 2 s. v. *letka*.

- W. *-itawa*, *-atawa* "you (plur.)" (subjective): Fox *-yägwe* "you (plur.)" (conjunctive); Cree *-yek* (subjunctive-participle); Oj. *-ieg* (subjunctive; < **-yegwa* > **-yego*, as indicated by pluperfect *-iego-ban*)
- W. *-a* "him": Fox *-a-* "him" (conjunctive; see under *-k* and *-it* above); Cree *-a-*; Oj. *-a-*. Note that in Algonkin, as in Wiyot and Yurok, when (in subordinate modes) both pronominal subject and object are suffixed, objective elements precede subjective elements; thus, Fox *-a-tci* (< **-a-it*) "him—thou" like W. *-a-it* (often contracted to *-et*) "him—thou."

OTHER VERB SUFFIXES

(including elements best considered as secondary verb stems)

- W. *-ākw* in *wānākw* "tree": Fox *-ā'kw-* "wood, tree;" Cree *-āsku-* (e. g. *asku-siy* "green wood")
- W. *-ātho* causative suffix: Bl. *-ats-* causative suffix
- W. *-er* suffix found on intransitive verbs (including numerals and adjectives; e. g. *rikw-er* "three," *kacam-er* "small," *guwu-bets-er* "it is becoming dry;" < **-in*): Cree *-n* suffix of first and second persons singular indicative of intransitive verbs (including adjectives; e. g. *ni-miyosi-n* "I am good," *ni-pimipattā-n* "I run," contrast *miyosi-w* "he is good," *pimipattā-w* "he runs"); and *-n* suffix of third person inanimate indicative of many intransitive verbs (adjectival and impersonal; e. g. *miwāsi-n* "it is good," *kimiwa-n* "it rains")
- W. *-lāk* adjectival suffix on terms of color: Fox *-tag-* secondary stem referring to color.
- W. *-layer* suffix in verbs of cutting and related activities (e. g. *twe-layer* "to cut, notch," *ka-layer* "to whittle," *hawe-layer* "to mash," *gutwaiap-layer* "to brush"), probably best considered as secondary stem: Cree *-sw-ew* (animate object), *-s-am* (inanimate object) "la marque du feu, du ciseau et du couteau," *-sawat-ew* (animate object), *-sawat-am* (inanimate object) "l'action du couteau ou du ciseau"
- Y. *-pul* in *tenpul* "rain": Oj. *-bissa* "to rain" (secondary stem), Mic. *kī'-pēšax* "it rains"
- W. *-rakw*, *-erakw* (< **-nakw*) verb suffix "to be" (perhaps better defined as denoting "to be so and so in appearance or character;" e. g. *gots-herakw* "he is good-looking," *makL-eraku-il* "he is small"): Fox *-nāgu-* "look, appearance, resemblance" (secondary stem); Cree *-nāku-si-* (animate), *-nāku-a-* (inanimate) verb suffix indicating "action de la vue" (e. g. *miyo-nāku-si-w* "il a belle apparence")
- W. *-tskarer* suffix in verbs of peeling (e. g. *rari-tskarer* "to shave, plane," *bitcwe-tskskarer* "to peel," *leriwoke-tskarer* "to peel," *ci-tskarer* "to flay"), probably best considered as secondary stem: Cree *-kkut-ew* "l'action du couteau, de la hache et de la verloppé, sur le bois"
- W. *-u*, *-au* adjectival suffix (e. g. *kacew-au* "short," cf. *kacam-er* "small;" perhaps

predicative, as in *ra'l-aw-il* "it is long"): Cree -*w* third person inanimate suffix of certain intransitive verbs (adjectival and impersonal; e. g. *mas-kawa-w* "it is strong," *takkigamiw* "liquid is cold"); Bl. -*o*, -*u* predicate inanimate adjectival suffix (e. g. *ómaxk-o* "big," cf. animate *ómaxksim* for persons, *ómaxkimin* for animals, *ómaxksiksim* for trees). Do Cree inanimate adjectives in -*n* and -*w* correspond respectively to W. adjectives in -*er* and -*au*?

NUMERAL CLASSIFIERS

- Y. -*emi* "times, occasions, years" (e. g. *naxkcemi* "three years"): Bl. -*mi* numeral classifier for "years" (Uhlenbeck states: "In order to indicate age the noun *stúyi* 'winter' is suffixed to the numeral stems and the suffix -*mi* is placed thereafter, which complexes are then conjugated like ordinary verbs")
- Y. -*en* "days" (e. g. *naxkcen* "three days"): Bl. -*ni-* numeral classifier for "days and nights;" compounded with this is Oj. -*gwan* "days and nights" (e. g. *nijo-gw-an* "two days," morphologically and etymologically parallel to Y. *nä'-än* "two days")
- Y. -*erpi* "obsidian blades" (e. g. *nerxkcerpi* "three obsidian blades"): Oj. -*ābik* "objects of metal, stone, glass" (e. g. *nijw-ābik* "two such objects, two dollars," morphologically and etymologically parallel to Y. *ner'-erpi* "two obsidian blades"); Cree -*ābiskw-* "iron, stone"
- Y. -*o* "months, dollars" (e. g. *naxkco* "three months, dollars"): Oj. -*o* used with numerals to indicate "measure" (e. g. *nijo* "two before substantives denoting measure" <*nij* "two;" *nijwāssō* <*nijwāsswi* "seven")

NOUN SUFFIXES

- W. -*akw* general locative (e. g. *mes-akw(i)* "in the fire;" Y. -(*i*)*k* (e. g. *mets-ik* "in the fire"): Fox -*g'* general locative; Oj. -*ng*; Cree -*k*
- W. -*ātc*, -*hāts*, -*wāts* diminutive suffix: Cree -*s*, -*ś*, -*sis*, -*śiś* diminutive suffixes (-*sis* is doubly diminutive); Oj. -*ns* diminutive suffix, -*sh* pejorative suffix; Nat. -*es* diminutive suffix; Mic. -*tśiś*, -*dziśiś* (morphologically parallel to Cree -*sis*, -*śiś*)
- W. -*il* derivative noun suffix, apparently instrumental in force (e. g. *cđor-ez* "index finger, pointer;" *dakaks-il* "gun"): Bl. -*s(i)* noun ending, perhaps instrumental in force (e. g. *mistsi-s* "stick," cf. *kits-istsi-mi-nūna* "our stick" and, with -*kw*- suffix, Cree *misti-kw-*; *motsi-s* "hand," cf. *motsi-sts* "hands," -*sts* being inanimate plural, and, with another suffix, Cree *mitchi-tchiy*; *moyi-s* "lodge," cf. *moyi-sts* "lodges;" *moksí-s* "awl," Oj. *miđo-ss*, cf. Bl. *mo kṣi-ks* "awls," -*ks* being animate plural. That *moksíks* is not phonetically simplified from **moksís(i)ks* is indicated by such cases as *oxsís* "her younger brother," plur. *oxsisi-ks*, where -*s(i)* is no derivative suffix)

Aside from any question of direct comparison of morphological elements, it is abundantly clear that Algonkin has several important morphological characteristics in common with Wiyot and Yurok. Among these, so far as the limited material at our disposal allows us to generalize, are:

1. Possessive pronominal elements are prefixed to noun stems. There are distinct elements for first person, second person, and third person singular. In Wiyot, as in Algonkin, second and third person plural possessive prefixes are identical with corresponding singular elements (cf. W. *kiluwa ku-* "your," literally "ye thy-" with Fox *ke-pwa* "your"). For body-part nouns *m-* is used to indicate indefiniteness of possessor.

2. Independent personal pronouns are found which are etymologically closely related to possessive pronominal prefixes. They are characterized by suffixes which agree to a remarkable extent (with *-l* of W. *yi-l* "I" and *ki-l* "thou" and *-l* of Y. *qe-l* "thou" cf. *-l* of Mal. *ni-l* and *ki-l*; with *-nār* = *-nān* of W. *hi-nār*, *wi-nār* "we" cf. *-nāna* of Fox *nī-nān^a* and *kī-nān^a* and Bl. *ni-stū-nāna*; with *-lu-wa* of *ki-lu-wa* "ye" cf. *-la-wa(w)* of Cree *ki-ya-waw* and Mic. *ke-low* = *ki-la-w*).

3. In Wiyot and Yurok verbal forms pronominal elements are suffixed. In Algonkin pronominal prefixes are found only in indicative forms and are identical with possessive elements. In all other cases, to a large extent also in indicative forms, pronominal elements are suffixes. In Arapaho and Micmac indicative pronominal elements are suffixed only, being really conjunctive in origin. It does not seem likely that Arapaho and Micmac represent a more archaic usage in this respect, in view of the occurrence of pronominal prefixes in verb forms in Cheyenne and Blackfoot as well as in nearly all Central and Eastern dialects. On the other hand it seems very probable that the indicative with prefixed pronominal elements is a peculiar development of Algonkin, based on or influenced by the possessive series (cf. the development in Micmac of a new conjunctive series which is evidently based on the possessive forms). The pronominal series for the conjunctive and related modes, possibly also some of the suffixed elements of the indicative, represent, then,

the historically oldest Algonkin forms. They are etymologically parallel to the suffixed elements of Wiyot and Yurok. In Algonkin, Wiyot, and Yurok objective pronominal suffixes precede subjective elements.

4. Preceding the verb stem are often one or more elements of temporal or modal significance. These shade off into a set of adverbial prefixes which are doubtless verb or other stems that have become specialized as first position elements (such are W. *ru-* "all," *kul-* "back, again," *let-*; Y. *tsyu-* "all;" Fox *tcāgi-* "all," *tetep-* "in a circle").

5. Several derivative verb suffixes (e. g. causative, reflexive) are found. A number of suffixed elements are found whose significance is so specific or concrete that they are best looked upon as secondary stems (see, e. g., W. *-tskarer* and *-layer* above). The peculiar method of compounding verb stems of various positions which has been described in detail for Fox by Jones and no less clearly indicated, though in rather different terms, for Cree by Lacombe, thus bids fair to be paralleled in the verb structures of Yurok and Wishosk. Much more material, however, is needed before a point of this character can be satisfactorily established.

6. Animate and inanimate are carefully distinguished in Algonkin. For Yurok Kroeber notes several adjectives which have distinct animate and inanimate forms, animate forms being characterized by suffixed *-er* (e. g. *montse* "white," animate *monter-er*; *cokoto* "red," animate *cerkert-er*). It seems difficult to believe that this fundamental distinction is expressed in Yurok only in the adjective. There must be other evidences of its operation that have not yet been disclosed.

7. Numeral stems are frequently followed by classifying suffixes. That such exist in Wiyot as well as in Yurok is demonstrated by W. *-eu*, *-ayu* "years" and *-āk*, *-wāk* "days." Besides such numeral classifiers as have been noted above, Ojibwa and Yurok both possess elements denoting "fathoms" and "canoes," though these do not seem to be etymologically connected.

8. As distinctive of the noun may be noted a general locative suffix and a diminutivizing element which is also suffixed.

9. Reduplication is not widely used in either Algonkin or Yurok-Wiyot. It is, however, employed to some extent in both, chiefly to express iteration (cf. W. *tsitsir* "to sneeze" with Cree *tchatchāmow* "he sneezes").

Some of these morphological traits are, of course, rather general in character and not to be considered as carrying much weight when taken singly. Taken *en masse*, however, and in connection with the specific resemblances in morphological elements listed above, I think it will have to be conceded that the morphological evidence for our thesis is not to be despised. I am well aware of the probability that a considerable number of my lexical and morphological parallels will, on maturer knowledge, have to be thrown out of court; I cannot hope to have always hit the nail on the head. However, even if we eliminate fifty per cent. of our cognates as errors of judgment (doubtless far too great a sacrifice to caution) we are still confronted with no fewer than one hundred or more reasonably close analogies in stems and morphological elements.

4. PHONOLOGICAL NOTES

A really sound study of Algonkin-Yurok-Wiyot linguistics demands first of all the establishment of the phonetic laws that have operated to bring about present phonetic (and, in its train, no doubt often also morphologic) divergence. Unfortunately our knowledge of even Algonkin phonology is as yet in its infancy. No very precise data as to phonology will therefore be expected of us at this stage. Nevertheless I believe that at least a few sound-relations can be made out with reasonable certainty.

WIYOT-YUROK *h*-.

Wiyot and Yurok not infrequently have *h*- where Algonkin has no initial consonant. Cheyenne and Arapaho, however, seem to have *h*- in analogous cases. It seems not unlikely, then, that most Algonkin dialects have lost *h*-, at least in certain cases.

W. *h̄lakw* "deer"; Oj. *atikw-* "caribou"

W. *hēikw* "louse"; Cree *ikkwa*

W. *hālu* "seven"; Mic. *eluwīginaAk'*

W. (*h*)*u-* "his" (Yurok *o-*); Cree *o-*

Y. *horäu* "arrow"; Cree *atus*; but Ar. *hoti*

Y. *hi-*, *he-* demonstrative element: Fox *i-*

W. *hèkw* "snow": Ch. *hǐ'stās*

Y. *ha'äi* "rock": Ar. *haha'ana"kä* (reduplication of *ha-* seems to indicate that *h-* is organic)

W. *hi-* prefix of past time: Ch. *-'*

In W. *hu-* it seems likely that *h-* is only secondary (cf. parallel forms *u-* and *w-*); loss of *h-* in W. is illustrated also in *haluwi* "canoe"; *ru-d-aluwi* "my canoe." In view of such correspondences as Y. *horäu*: Ar. *hoti* it now seems plausible that Ch. *hitän* "man" and Ar. *hinen* have original *h-*, which has been lost elsewhere in Algonkin (**hilini-w-* > Fox *ineni-w-*).

WIYOT-YUROK *w.* As already noted, W. *w* and *m* seem to interchange in certain circumstances. In spite of this there is every reason to believe that organically distinct *w* and *m* are to be kept apart in W. (cf. W. *w-* "his": *m-, w-* "somebody's;" W. *mīw-* "to eat," Ch. *miv-*; W. *welu* "hollow," Mic. *wal-*). In certain cases W. (and Y.) *w* is found where Algonkin has *m*.

W. *witā'w-ił* "rejoiced": Fox *metā-* "to take pleasure in"

W. *weratc* "to drink": Cree *mini-kkw-*

Y. *hèl-wenōo-c* "give me": Fox *mī-* "to give"

W. *-lewu* "to dance": Cree *nimi-*

W. *tsaw* "to touch": Cree *sāmi-*

W. *wur* "north": Ch. *notam* (see under W. *wur* above)

W. *tawī* "to butcher"; Nat. *tumm-* "to cut off"

In W. *weratc* and *wur* and Y. *-wenoo-*, *w* may have been dissimilated from *m* because of following *n* (W. *r = n*). Parallel to this may be Fox *näw-* "to see": Abn. *nem-*.

WIYOT *p.* In one or two cases W. *p* (*b*) seems to correspond to Algonquin *m*. Evidence for this is so scanty, however, that it may well be doubted whether there is anything more than error involved.

W. *bitcə-tcker* "grandfather": Oj. *misho-m-*

W. *pātūt* "earth": Ar. *bīta'a"wu* (Ar. *b < m*)

This interchange may be also involved in Mic. *bapkāak* "down stream" (cf. Y. *pul-ik*, *puleku-k*): Cree *māmik* "bas d'une rivière."

WIYOT *l.* Though W. *l* seems sometimes to vary with *n—r*, it is quite clear that it is in many cases organically distinct from that sound. As for Algonkin, it is well known that certain dialects

possess both *n* and *l* as distinct consonants (e. g. Micmac), others only *n* (e. g. Fox). Michelson seems to assume that Algonkin originally possessed only *n* and that, under undefined circumstances, it developed to *l* in several dialects. Inasmuch as *l* occurs in all positions (and cannot therefore well be explained as resulting from *n*); as all Eastern dialects (Montagnais, Micmac, Abenaki-Penobscot, Malecite, Natick, Delaware), Peoria and related dialects, and Cree all have *l* (or its reflexes; various Cree dialects have *l*, *r*, *y*, or *ð*—see Lacombe) as distinct from *n*; and as Cheyenne seems to have *t* or its palatalized reflex *ts*, not *n*, where Eastern dialects have *l* (cf. Ch. *hitān* “man” with Mont. *ilInū*), I prefer to believe that original Algonkin possessed both *l* and *n* and that these sounds were leveled to *n* in several Central dialects (Fox, Kickapoo, Ojibwa), apparently also in Blackfoot and Arapaho. This is confirmed by comparison with Wiyot and Yurok. Examples of Wiyot *l* corresponding to Algonkin *l* are:

- W. *letkak* “sand”: Cree *yekaw*; Oj. *nēgaw*. Cree *y*: Oj. *n* necessarily points back to Algonkin *l*.
- W. *pelal* “to break open, cut”: Cree *payipa-* “percer de part en part” (< **pali-*)
- W. *welu* “hollow”: Mic. *wal-* “hollow;” Cree *wāyā-* “to hollow;” Oj. *wāni-*
- W. *hālu* “seven”: Mic. *eluwiginaAk*; Fox *nōhig*
- W. -*l* of *yil* “I,” *kil* “thou,” *kiliwa* “ye”: Mal. *nil*, *kil*; Fox *nīn^a*, *kīn^a*, *kīnwāw^a*
- W. *di-wile* “somebody”: Cree *awiyak* “person” (< *-*wila-*)
- W. -*e'l* third person possessive suffix: Mal. -*al'*, -*l'* obviative suffix

As Michelson has pointed out, Cree sometimes has *t* where Ojibwa and Fox have *n*. It will be noted, however, that in practically all such cases Eastern dialects have *l*, so that what is really involved is not primarily a *t—n* interchange but a *t—l* interchange. Here again Wiyot and Yurok are confirmatory, inasmuch as they sometimes have *l* where Algonkin has *t* or vice versa. Examples of Wiyot *l* as compared with Algonkin *t* (or '*t*) are:

- W. *mīl-iL* “medicine-man”: Oj. *midē* “Indian of the Grand Medicine” (Oj. *d* < *t*)
- W. *wat-me-lok* “ear”: Mont. -*tuki*; Bl. *mo-xtóki-s*
- W. *me-lūl* “mouth”: Cree *mi-ton*
- W. *hōlakw* “deer”: Oj. *atīkw-* “caribou” (-*t-* < -'*t*-)
- W. *lalisw* “to sing”: Mal. *dli-n' tq-* (*dl-* < **tl-*)
- W. *let-* (see above): Fox *tetep-* “in a circle”

W. *lalisw* is perhaps assimilated from original **tali-*; this may be supported by Y. *rurawo* "to sing," inasmuch as Y. *r* often goes back to original *t* (see below), *rurawo* assimilated from **rula-* < **tula-*. Fox *tet-* is perhaps similarly assimilated from Algonkin **let-*.

Examples of Wiyot-Yurok *t* corresponding to Algonkin *l* are apparently about equally numerous. It is interesting to note that in some cases one or more Algonkin dialects agree with Wiyot-Yurok as against other Algonkin dialects.

W. *dgat* "penis": Cree *-ittakāy* "genitals of male" (*y* < *l*)

W. *tawik-wi* "to visit": Fox *nawi-* (< **lawi-?*)

W. *tem* "to sit": Del. *lum'əl-apí*

W. *m-ūt* "tongue": Del. *-ilAnō*; Cree *-eyaniy* (< **elani*); but Bl. *m-atśini* (< *-atīni < *-itanī); Ar. *be-iθan* (< *-itan); Gros Ventre *-itAni*

Y. *horäu* "arrow" (< **hotäu*; see below): Oj. *-anwi* (< *-alwi); but Cree *atus*; Ar. *hoti*

In regard to this interchange of *t* and *l*, whose causes are not yet understood, it is suggestive to note that both *-t* and *-l* seem to become *-z* in Yurok (see part 2 of this paper); further that *t* and *l* (or its reflex *y*) sometimes interchange within Cree itself (e. g. *wāti* "trou dans la terre": *wāyi-si-w* "creux").

There are, finally, cases of *l-n* interchange. Examples of Wiyot *l* corresponding to Algonkin *n* are:

W. *me-lūl* "mouth" (assimilated from *-lūn?*): Cree *mi-ton*

W. *me'lakw* "elk": Oj. *mons* "moose" (?)

W. *p'lē-tk* "rock": Mal. *p'Anā-p'sk'*

W. *lakwet* "to cough": Mal. *nēk'-hAmo-*

W. *letka* "to fall, descend": Cree *nitta-ku-si-w*

W. *-lewu* in *halewu*, *olewu*, *dolewu* "to dance": Cree *nimi-* (assimilated from **lim-?*)

WIYOT *n*. Wiyot *n* (which frequently becomes *r*) and Yurok *n* regularly correspond to Algonkin *n* (e. g. W. *dān-* "father, son": Abn. *ōdadandā'* "his father;" Y. *new* "to see": Fox *näw-*). There are several cases, however, of Wiyot *n* (*r*), as of *l*, corresponding to Algonkin *t* (or 't').

W. *mireL* "angleworm": Cree *mottew*; Mic. *wēte*

W. *unas* "to crawl": Fox *-ōtā-*

W. *daru* "all": Cree *tatto* "every"

W. *wur* "north": Ch. *notam*

W. *-tskar-er* suffix used with verbs of peeling: Cree *-kkut-*

In W. *metkan* "nail," Cree *-eskan* "horn," Wiyot-Algonkin *n* corresponds to *t* of Yurok *-wekkete* "nail." Within Wiyot itself *t* and *n* seem to vary in *atel* and *anel* "to say" (cf. Cree *itew*: Oj. *inā* "to tell").

YUROK r. Yurok *r* does not ordinarily seem to be equivalent in origin to Wiyot *r* < *n* (yet cf. W. *wat-kerāt* "bone" with Y. *werl-ker*). In several cases it can be inferred to go back to *t*. Within Yurok itself *r* and *t* interchange in *goor-eu* "one," normal form of stem: *goot-*.

Y. *-erkerL* "knee": Cree *-kitikw-* "molette du genou"

Y. *-p-ern* "nose": W. *-etere*; Mic. *-itŋ*

Y. *horäu* "arrow": Cree *atus*; Ar. *hoti*

Y. *rurawo* "to sing" (assimilated from **rula-*): Mal. *dli-n[·]io-* < **tili-*

Perhaps also:

Y. *pernekr* (misprint for *pern-erk?*) "hand-measure": Mic. *-pidŋ* "hand"

One case has been noted in which Y. *r* seems to correspond to Algonkin *l* (*t—l* interchange?):

Y. *rokw* "wind": Cree *yotin'* (< **lotin*; Oj. *nodin*)

WIYOT-YUROK L. Voiceless affricative or spirantal *l*, which is so common in Pacific Coast phonetics, occurs frequently also in Wiyot and Yurok. As it does not occur at all in Algonkin, some reflex of it should be ascertainable, if our thesis is to be considered valid. I believe that original *l* has regularly developed in Algonkin to *s*.

W. *gākwil* "old man": Oj. *akiwesi*

W. *džipL-il* "beard": Ch. *mī'-shis* "whiskers" (original postvocalic *p* is regularly lost in Ch.)

W. *ho-dīlere* "umbilical cord": Oj. *-diss* "navel"

W. *me-weril* "flesh, fat": Mic. *weoós* "flesh"

W. *wat-iłat* "shell": Oj. *ess* "shell"

Y. *käpel* "brush": Oj. *kibinsan* "shrub, brush"

Y. *Lgel* "earth": Cree *askiy* (Y. *Lq*- may, however, go back to *tk-*; see below)

W. *klet* "hot": Oj. *kijāte*; Ar. *hā'sitā'*

W. *Leriwoke-tskarer* "to peel": Oj. *sinigo-* "to rub"

W. *waz, mal* "to eat": Fox *wiseni-*

W. *Lephai* "to taste": Cree *-spo-ku, -spi-te* "it tastes"

W. *-layer* suffix in verbs of cutting: Cree *-sawāt-* "l'action du couteau ou du ciseau"

In view of these cases of *l* > *s*, W. -*lāk* suffix referring to color: Fox -*tlag-* must be considered as rather doubtful.

WIYOT-YUROK *tc, ts*. There is good evidence to show that original *tc* (*ts*) was regularly simplified in Algonkin to *c* (or *s*).

- W. *watcer* "girl": Mal. *wāsiš* "child"; Mic. -*wādžitš*
- W. *bitcō-tcker* "grandfather": Oj. -*misho-miss*; Ar. -*bäci-bä* (< *-*mäci-mä*)
- W. *gwatc* "mother": Nat. -*kas*; Mic. -*kech*
- W. *wetserakw* "son-in-law": Nat. *wussé-num* "he is son-in-law of"
- W. *djipL-il* "beard" (*dj* doubtless merely variant of *tc*): Ch. *mi'-shis* "whiskers"
- W. *tckatc* "leg;" Y. *tska* "foot": Cree -*skät* "leg"
- W. *gitcái-ailokwe* "sun": Oj. *gisiss*; Ar. *hīšis*
- W. *bitcewe-tskarer* "to peel": Oj. *bishagi-bina* "to peel"
- W. *buic* "to scratch": Cree *pes-* "tracer des lignes" (Lacombe's *s* includes both Algonkin *s* and *c*)
- W. *gets* "cold": Oj. *kissina* "it is cold"
- W. *tsaw* "to touch": Cree *sāmi-*
- W. *tcatac* "south": Oj. *järwan* (Oj. *j* < *c*)
- Y. *kits-* perfective verbal prefix: Fox *kīc(i)-* "to finish"
- Y. *mets* "fire;" W. *mes*: Oj. *missan* "wood for fuel," *mishi* "piece of wood for fuel;" Nat. *mishash* "wood"
- W. -*ātc* diminutive suffix: Cree -*s*, -*š*; Oj. -*ns*, -*sh*; Mic. -*tšitš*, -*džitš*

It is important to note that while original *l* becomes Algonkin *s*, original *tc* (*ts*) normally becomes *c* (i. e. *š*), only secondarily, it would seem, *s* (*tck-* perhaps regularly becomes *sk-*). It is possible that Algonkin *s* (of Oj. *miss-an*): Algonkin *c* (of Oj. *mishi*) reflects W. *mes*: Y. *mets*. It is interesting to observe that in these cases Micmac has *tc* (i. e. *š*) or *dž* where other Algonkin dialects have *c* (or *s*). Is this an archaic feature of Micmac? In one case original *tsk* seems to have become Algonkin 'k (*kk*) instead of *sk*:

- W. -*tskarer* verbal suffix referring to "peeling": Cree -*kkut-ew* "l'action du couteau, de la hache et de la verloppe, sur le bois"

Far less commonly Yurok-Wiyot *tc* (*ts*) corresponds to Algonkin *tc* (*ts*):

- Y. *tsegī-* "all": Fox *tcāgi-* "all"
- W. *tsék* "child": Bl. *tsiki* "boy"

WIYOT *tk*. Wiyot *tk*, which regularly appears as Yurok *lk* (*lg*), has become assimilated in Algonkin to *sk, ck*.

- W. *me-tkan* "nail;" Y. *-we-Lkete*: Oj. *eshkan* "horn;" Nat. *askon* (i. e. äskan?); doubtless also Oj. *-shkānj* "nail;" Cree *-skasiy*. If *-tsk-* of Bl. *mo-tskināu* "horn" is not secondarily developed from Algonkin *sk*, it may represent an older development of original *tk* to *tsk* (*tck*), suggesting that *tk* > *tsk* fell together with original *tsk*, both then becoming normal Algonkin *sk*.
 W. *watkerāt* "bone;" Y. *-werLker*: Cree *oskan*
 Y. *-werLkun* "liver" (< **wat-kun*): Cree *oskun*
 W. *wat-ōtk* "fin": Cree *-oskwan* "tail"
 Y. *Lgel* (< **ikel?*) "earth": Cree *askiy*

Algonkin *sk* < *tsk*, *tk* fell together, it would seem, with original *sk* and developed in certain dialects still further to *'k* (e. g. Fox) > *kk* (e. g. Ojibwa); thus, Oj. *-kan* (i. e. *-kkan*) "bone" < *-*'kan* (cf. Fox *-o'kan*) < *-*skan* (cf. Cree *-oskan*) < *-*tskan* < *-*tkan* (cf. W. *watkerāt* = **watkenāt*).

In W. *letkak* "sand" and W. *letka* "to fall" (cf. respectively Cree *yekaw* and *nitta-*), *-tk-* has not developed to *-sk-*. I can offer no explanation (*let-* of *letka* is quite likely identical with *let-* discussed above).

Parallel to this change of *tk* to Algonkin *sk* (*ck*) is that of original *-tw-* to Algonkin *-cw-*:

- W. *ritw-* "two": Fox *m̄cw̄*:

Original *tkw* (> Yurok *lqw*) regularly developed in Algonkin, as would be expected, to *skw* (*ckw*), in Wiyot, however, to *tcw*:

- Y. *he-Lqāu* "behind" (< *-lqw-*, cf. Y. *horāu* "arrow" < **hotw-*); W. *towi* "behind" (< **ikwi*): Cree *iskw-* "le dernier"; Nat. *ashq-* (i. e. *ackw-*)

As far as can be seen at present, *tckw* or *lkw* could also here be assumed as starting point.

ORIGINAL *SK*, *SK'V*, *ST*. While Algonkin *sk* is in a number of cases the resultant of older *tk* and *tsk*, there is also an older set of words with *sk* and *skw*, in which *s* is probably original. While Wiyot has preserved both *tsk* and *tk* (Yurok has preserved *tsk* but changed *tk* to *lk*), original *sk* (*ck*), *skw* (*ckw*), and *st* seem to have become simplified to *k*, *kw*, and *t*, generally with lengthening of preceding vowel.

- W. *me-lāk* "testicles" (< **lask?*): Mic. *ülsóók* (i. e. *Alsiik*)
 W. *kèk* "clear sky" (< **kisk?*): Mic. *-giskuk* "day;" Cree *kijik* "day, sky"
 W. *dokap*, *dokaw* "to crack" (< **toska-?*): Oj. *tāshka* "to split"
 W. *mākw* "grizzly bear" (< **maskw*): Cree *maskwa* "bear"

- W. *hèkw* "snow" (< **hiskw*?): Ch. *hī'stās*
 W. *wān-ākw* "tree" (< *-āskw?): Cree *ask-āsku-siy* "green wood;" Fox *ā'kw-*
 (< *-āskw-) "wood, tree"
 W. *māti* "wood" (< **masti*): Cree *misti-kw-*; Bl. *mistsi-s* (< **misti-*); Fox
 me'i-gw- (< Algonkin **misti-*)

Vocalic lengthening followed by *kw* seems to be equivalent to Algonkin 'kw (*kkw*) in:

- W. *hēikw* "louse": Oj. *ikwa*; Cree *ikkwa*

Here again I am fully aware of the probability that I have made more than one miss in my search for phonetic laws. I hope, however, that it has become quite evident that such really exist, as we compare Algonkin with corresponding Wiyot (and Yurok) forms. This feeling should do much to inspire confidence in the nature of our material and in the validity of our hypothesis.

To sum up: There is good lexical, morphological, and phonological evidence to genetically relate Algonkin to Wiyot and Yurok. Whether Wiyot and Yurok form a group as compared with Algonkin proper or whether Wiyot, Yurok, and Algonkin proper are three distinct major divisions of the stock remains to be seen. Although there are several startling special threads binding Wiyot and Yurok to Blackfoot and Cheyenne (as might be geographically expected), I do not believe that either of these latter or Arapaho will turn out to be more closely related to the Californian languages than to the other members of the Algonkin stock as hitherto understood. As for the name of the stock whose territorial limits are thus unexpectedly enlarged, I see no reason to depart from the well-accepted term "Algonkin." I suggest that the whole stock be termed "Algonkin" and that the dialects ordinarily known as Algonkin be specifically referred to as "Plains-Atlantic" dialects, wherever it is necessary to distinguish ("Eastern Algonkin," which would be simpler, is too definitely connected in most minds with the dialects of the Atlantic seaboard to be given a new meaning). It is not necessary to waste words here on the new vistas opened up of earlier distributions and movements of aboriginal populations in America. Obvious possibilities of various sorts will present themselves to all who read.